

## OPHTHALMOLOGY.

38. *Glaucoma*.—The appearances in this disease are usually considered as resulting from some change in the vitreous humor (or hyaloid membrane), the retina, or choroid. The investigations of Dr. WM. MACKENZIE of Glasgow, lead him to believe that these forms of glaucoma are very rare and that by far the most common seat of the disease is the lens. He is inclined to think that there is never any very distinct glaucomatous appearance (that is to say, cloudiness of a greenish hue), except what is caused by the amber or reddish-brown color of the central and posterior laminae of the lens. In lenticular glaucoma, the lens has become, in a certain sense, dichromatic, being of a deep amber when allowed to transmit the light, but appearing green by reflected light; the green hue being probably the result of the absorption of the extreme prismatic rays of the light entering the eye, while the middle prismatic rays are but little affected.

All who begin to examine diseased eyes, find considerable difficulty in distinguishing lenticular glaucoma from lenticular cataract; but a little experience generally serves to make them acquainted, more accurately than any verbal description can, with the diagnostic appearances of these two diseases. No mere cataract is green; the cloudiness in glaucoma is considerably remote from the pupil; and though sometimes the cloudiness is limited and surrounded by a lucid ring, while in other cases it extends almost across the breadth of the lens, yet it is always evident that the superficial laminae of the lens are transparent in simple lenticular glaucoma. The greenish cloudy surface is always uniform, smooth, and as if polished, never streaked, spotted, or apparently rough, as is generally the case in lenticular cataract. The shadow thrown by the iris on the greenish cloudy surface is much broader than the shadow thrown upon a lenticular cataract.

"The reddish-brown color," Dr. Mackenzie observes, "upon which lenticular glaucoma depends, affects only the internal and posterior laminae, and fades away into an amber hue towards the surfaces, and especially the anterior surface and circumference of the lens. These, so long as the disease is one of simple lenticular glaucoma, have lost comparatively little of their natural transparency, but the reddish-brown part often presents, on making a section of the extracted lens, a peculiar dryness of substance, as well as a considerable degree of opacity."

"After lenticular glaucoma has existed for a time, the surfaces of the lens may become coagulated and opaque, so as to constitute a complication of glaucoma with cataract. This sometimes occurs very suddenly."

Dr. Mackenzie has tested these views by an examination of the eye catoptrically according to the method of M. Sanson as detailed in a former No. of this Journal. (August 1838 p. 494.) The following are the results of his observations. The conditions under which they succeed best are, that the pupil be previously dilated by belladonna; the observer and patient placed in moderate daylight; the back of the patient turned towards the window; the patient seated so that the observer looks rather down into the eye than upwards; and a candle used which burns steadily, and does not blaze much.

"On reading over the following particulars to Dr. Staberoh, he was kind enough," says Dr. M., "to favour me with a few annotations, which I consider too valuable to be lost, and which I therefore subjoin under their respective heads:—"

"1. In incipient lenticular glaucoma, or what we may call the first degree of that disease, both the deep erect image, and the inverted one, are distinct."

"[While its outline remains pretty sharp, the deep erect image is rather larger in size, and brighter than in the healthy eye. It is also somewhat of a yellowish hue. With the increase of glaucoma the inverted image becomes larger, and more of a yellowish color; its outline becomes sooner diffused than that of the deep erect image.]"

"In estimating the changes which are observed to occur in the appearances of the images reflected from the eye in its several diseased states, it is necessary to take into account two sources of these changes, viz. the state of the surfaces

which form the images, and that of the media through which we see them. Each of these causes must have an effect, more or less remarkable, in different cases of disease.—J. S.]

"2. In mean cases, or what we may call the second degree of glaucoma, the inverted image is pretty distinct, when formed near the circumferential part of the crystalline; that is to say, if the candle be moved by the observer towards the right side of the patient, while the right eye is the subject of examination, the inverted image will be seen behind the nasal end of the pupil. If the observer now brings the candle slowly in front of the eye, the inverted image, as it moves across the pupil, is seen to become less and less distinct, and in some cases is altogether extinguished; but as the candle approaches the patient's left side, it reappears behind the temporal edge of the pupil, being again formed by the circumferential portion of the posterior capsule. No such appearance as this is seen in lenticular cataract, a disease which always affects the superficial laminae of the lens in such a way as to prevent the formation of the inverted image by any part of the posterior surface of the crystalline body. The extinction of the inverted image, when the candle is placed directly before the pupil, is evidently owing to loss of transparency in that portion of the lens, which, in lenticular glaucoma, suffers a peculiar degeneration, characterized by dryness of substance and a reddish-brown color.

"[In moderately developed glaucoma, both images of the candle are represented by yellowish spots, or blazes, of a pretty bright appearance, following the motions of the candle in their corresponding directions.—J. S.]

"3. In complete lenticular glaucoma, or glaucoma of the third degree, the inverted image is no longer visible even at the edge of the lens.

"4. The deep erect image is better seen in the second and third degrees of glaucoma than in the healthy eye. It is large and evident, but its outline is not sharp; so that it often appears like a diffused blaze. It is best seen when the eye is looked at downwards, and from one side. The fact that it is more distinct than in the healthy eye, is to be attributed to the reddish-brown part of the lens serving as a foil to the image.

"[In the far-advanced stage of glaucoma, both images disappear entirely: but I am not sure whether, in this case, there is no complication with cataract commencing.—J. S.]

"5. In lenticular cataract, no inverted image is visible; while, from the anterior capsule, there is merely a general reflection, but no distinct image.

"[In incipient lenticular cataract, the inverted image becomes indistinct, and its outline as if washed off. It is changed neither in color nor in size. It is extinguished long before the cataract is fully developed. In capsulo-lenticular cataract, the inverted image fades much sooner than in mere lenticular cataract, and even when the capsule, or the peripheric substance of the lens, seems to be alone opaque, the image disappears much sooner than we should expect, from the apparently moderate degree of opacity.—J. S.]

"6. If the crystalline lens have been removed by operation, neither the inverted nor the deep erect image is visible.

"The catoptrical examination of the eye confirms, in the most satisfactory manner, the doctrine that glaucoma is, in general, an affection of the crystalline lens. Concerning this disease, Rufus and Galen were right seventeen hundred years ago; distinguishing by the name of *γλαυκώματα* those internal opacities which they found to be incurable, while on the more favorable, they bestowed the name of *ὑπόχυματα*. The former they believed to depend on a change of color and consistence in the crystalline lens, an opinion from which the moderns have erroneously departed; while they attributed the latter to the accumulation of a new substance suffused between the iris and the crystalline—a notion which the moderns have successfully corrected.

"Lenticular glaucoma may be considered as a nebula of the lens, while cataract may be compared to an albugo, or leucoma. Glaucoma, however, is in the centre, cataract is on the surface of the crystalline; and while the former is rare—

ly, the latter is generally unattended with amaurosis."—*London Med. Gaz.* April 1838.

39. *Use of the essential Oil of Turpentine in Diseases of the Eye.*—Dr. A. TRINCHINETTI's experience induces him to place great confidence in the oil of turpentine in the slow and deep-seated inflammations of the eye, especially in those that do not yield to antiphlogistic measures. Cases are given proving its utility in chronic inflammation of the iris or ciliary bodies, and in incipient gangrene of the cornea, all of these following the operation for cataract; in the chronic stage of rheumatic iritis, or even in the outset, if it be mild; in traumatic iritis, ulcers of the cornea, onyx and incipient glaucoma. The oil should be administered in emulsion, the dose varying from half a drachm to four drachms daily.\* The phenomena generally following its use are diminution or cessation of pain, a sense of general comfort, contraction of the vessels with gradual disappearance of the inflammatory fulness and lachrymation; the early dispersion of the matter effused into the anterior chamber or between the lamellæ of the cornea. Occasionally a sensation of weight and burning in the stomach, especially after full doses, was felt, and in some rare cases was sufficiently troublesome to prevent the further administration of the drug. Instead of producing a purgative effect, it caused constipation; the urine became abundant, of violet odour, was passed without pain and deposited a reddish sediment.—*Brit. and For. Med. Rev.* Oct. 1838, from *Giornale delle Scienze Med.-Chirurg.* Aug. 1836.

40. *Hereditary Hemeralopia.*—A very remarkable example of hemeralopia, hereditary for two centuries, is quoted by M. FLORENT CUNIER, in a memoir read before the Medical Society of Gand. The first of this race of hemeralopics was a butcher named Jean Nougaret, of the commune of Vendémian, born about 1637. The six following generations have all been affected, though in different proportions. The disease affects the descendants of Nougaret from birth, and whether they remain at Vendémian or reside elsewhere.

The following table gives a synoptical view of this remarkable instance of hereditary disease.

1st generation of	3 children	3 hemeralopia,
2d       "	16       "	10       "
3d       "	81       "	14       "
4th       "	208       "	23       "
5th       "	218       "	24       "
6th commencing,	123       "	11       "

Thus, of 649 children, 85 have been hemeralopic. The proportion of those affected with the disease to the whole number of births is decreasing.—*Bull. Med. Belge.* Dec. 1837.

## MIDWIFERY.

41. *On the Position of the Placenta in the womb during pregnancy, and on the manner the latter organ expands therein, as also of its subsequent contractions in the process of Parturition.*—There are some interesting and curious observations on this subject in the *Dublin Journal of Medical Sciences* for January last, by HUGH CARMICHAEL, Esq., one of the Surgeons of Coombe Lying-in Hospital, Dublin. This accoucheur is of opinion that the placenta does not usually occupy the fundus of the womb during gestation, but that its true position is at the posterior part of this organ, probably the lower down the further the gestation is advanced. He of course admits that the placenta is originally attached to the fundus of the uterus or near to this part, but he conceives that its change

\* The best formula for its exhibition is that proposed by Mr. Carmichael in 1829.